

AD-A144 842

19318B MLRS MISSILE NUMBER 450 411 471 ROUND NUMBER
V-587/AV-7 588/AV-8 589/AV-9(U) ARMY ELECTRONICS
RESEARCH AND DEVELOPMENT COMMAND WSMR NM ATM.

1/1

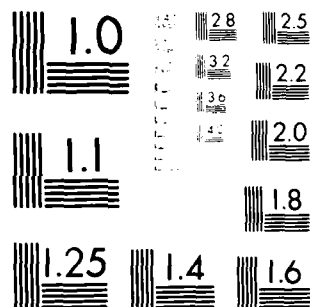
UNCLASSIFIED

D C KELLER MAY 84 ERADCOM/ASL/DR-1343

F/G 4/2

NL

END
DATE
FILMED
9-84
DTIC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

May 84
DR-1343

AD

12

METEOROLOGICAL DATA REPORT

19318B MLRS

Missile Number 450, 411, 471

Round Number V-587/AV-7, 588/AV-8, 589/AV-9

23 May 84

by

DONALD C. KELLER

Program Support Coordinator

Phone Number (505) 679-9568

AVN Number 349-9568

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND

DTIC
ELECTE
S AUG 24 1984 D
E

84 08 20 178

AD-A144 842

FILE COPY

DISPOSITION INSTRUCTIONS

Destroy this report when it is no longer needed. Do not return to the originator.

DISCLAIMER

The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

The citation of trade names and names of manufacturers in this report is not to be construed as official Government indorsement or approval of commercial products or services referenced herein.

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR-1343	2. GOVT ACCESSION NO. A144 842	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19318B MLRS Missile Number 450, 411, 471 Round Number V-587/AV-7, 588/AV-8, 589/AV-9		5. TYPE OF REPORT & PERIOD COVERED
7. AUTHOR(s) White Sands Meteorological Team		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS		8. CONTRACT OR GRANT NUMBER(s) DA Task 1F665702D127-02
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Electronics Research & Development Cmd Atmospheric Sciences Laboratory White Sands Missile Range, New Mexico 88002		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Electronics Research and Development Cmd Adelphi, MD 20783		12. REPORT DATE May 84
		13. NUMBER OF PAGES
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) Approved for public release; distribution unlimited.		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19318B MLRS, Missile Number 450, 411, 471, Round Number V-587/AV-7, 588/AV-8, 589/AV-9 are presented in tabular form.		

CONTENTS	PAGE
INTRODUCTION -----	1
DISCUSSION -----	1
GENERAL AREA MAP -----	2
LAUNCH AREA DIAGRAM -----	3
TABLES:	
1. Surface Observations taken at 1139 MDT at LC-33-----	4
2. Anemometer-Measured Wind Speed and Direction, Tower Levels 1, 2, 3, and 4, taken at 1139 MDT -----	5
3. Launch area Pilot-Balloon Measured Wind Data -----	6
4. Aiming and T-Time Computer Met Message -----	8
5. WSD Significant Level Data at 1000 MDT -----	9
6. WSD Upper Air Data at 1000 MDT -----	10
7. WSD Mandatory Levels at 1000 MDT -----	11
8. SMR Significant Level Data at 1000 MDT -----	12
9. SMR Upper Air Data at 1000 MDT -----	13
10. SMR Mandatory Levels at 1000 MDT -----	14
11. DON Significant Levels Data at 1000 MDT -----	15
12. DON Upper Air Data at 1000 MDT -----	16
13. DON Mandatory Levels at 1000 MDT -----	17
14. WSD Significant Level Data at 1139 MDT -----	18
15. WSD Upper Air Data at 1139 MDT -----	20
16. WSD Mandatory Levels at 1139 MDT -----	25
17. SMR Significant Level Data at 1139 MDT -----	26
18. SMR Upper Air Data at 1139 MDT -----	27
19. SMR Mandatory Level Data at 1139 MDT -----	28
20. DON Significant Level Data at 1139 MDT -----	29
21. DON Upper Air Data at 1139 MDT -----	30
22. DON Mandatory Level Data at 1139 MDT -----	31

INTRODUCTION

19318B MLRS, Missile Numbers 450, 411 and 471, Round Numbers V587/AV-7, V588/AV-8 and V589/AV-9, were launched from LC-33, White Sands Missile Range (WSMR), New Mexico, at 1138:47, 1138:52 and 1138:57 MDT, 23 May 84. The scheduled launch times were 1130, 1130:04.5 and 1130:09 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), Wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 Minutes.

(2) Anemometer data were provided from existing tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from Pilot-balloon observations at:

SITE AND ALTITUDE

LC-33 2 km

(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME

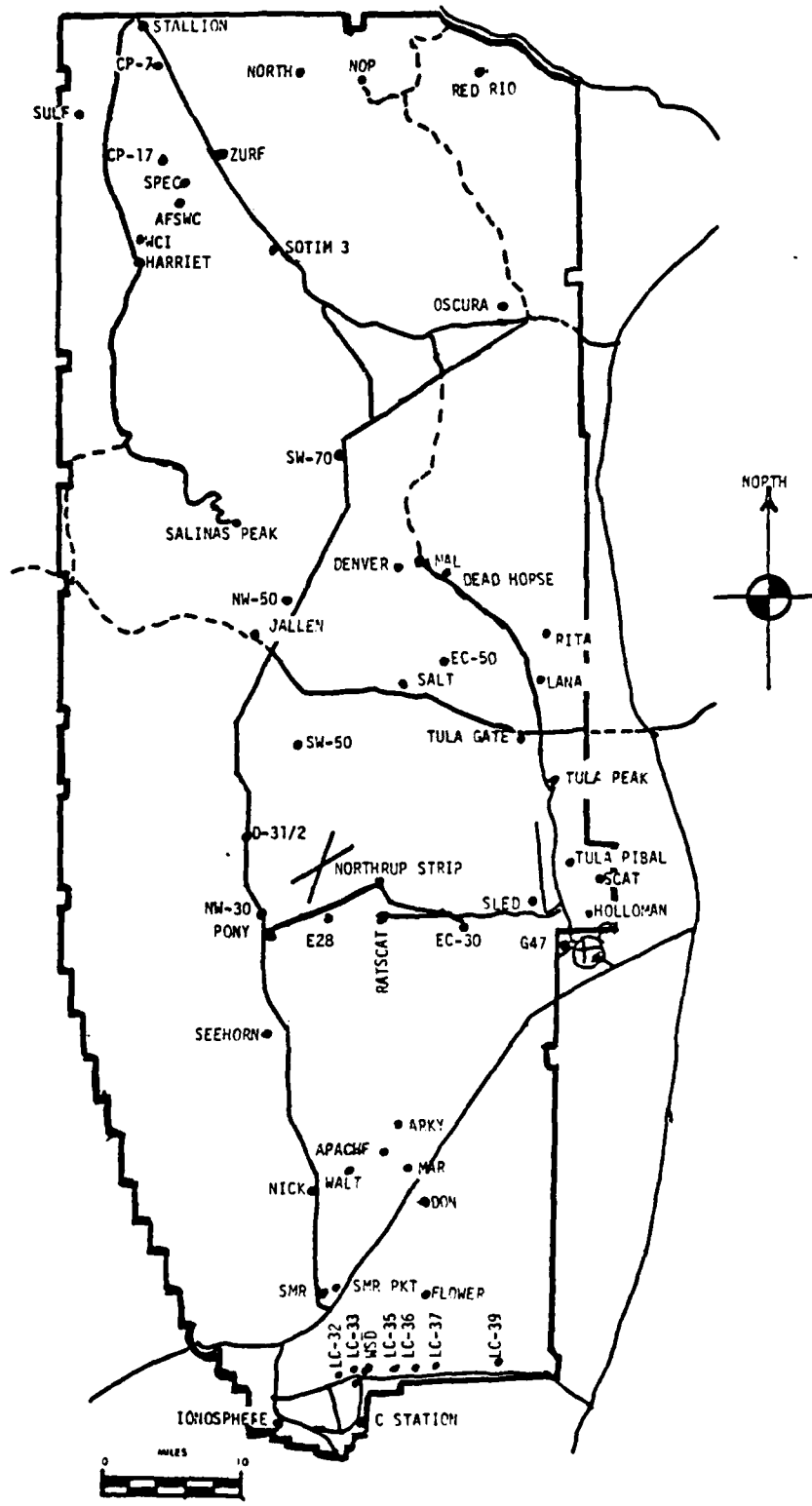
WSD	1000 MDT
SMR	1000 MDT
DON	1000 MDT
WSD	1139 MDT
SMR	1139 MDT
DON	1139 MDT

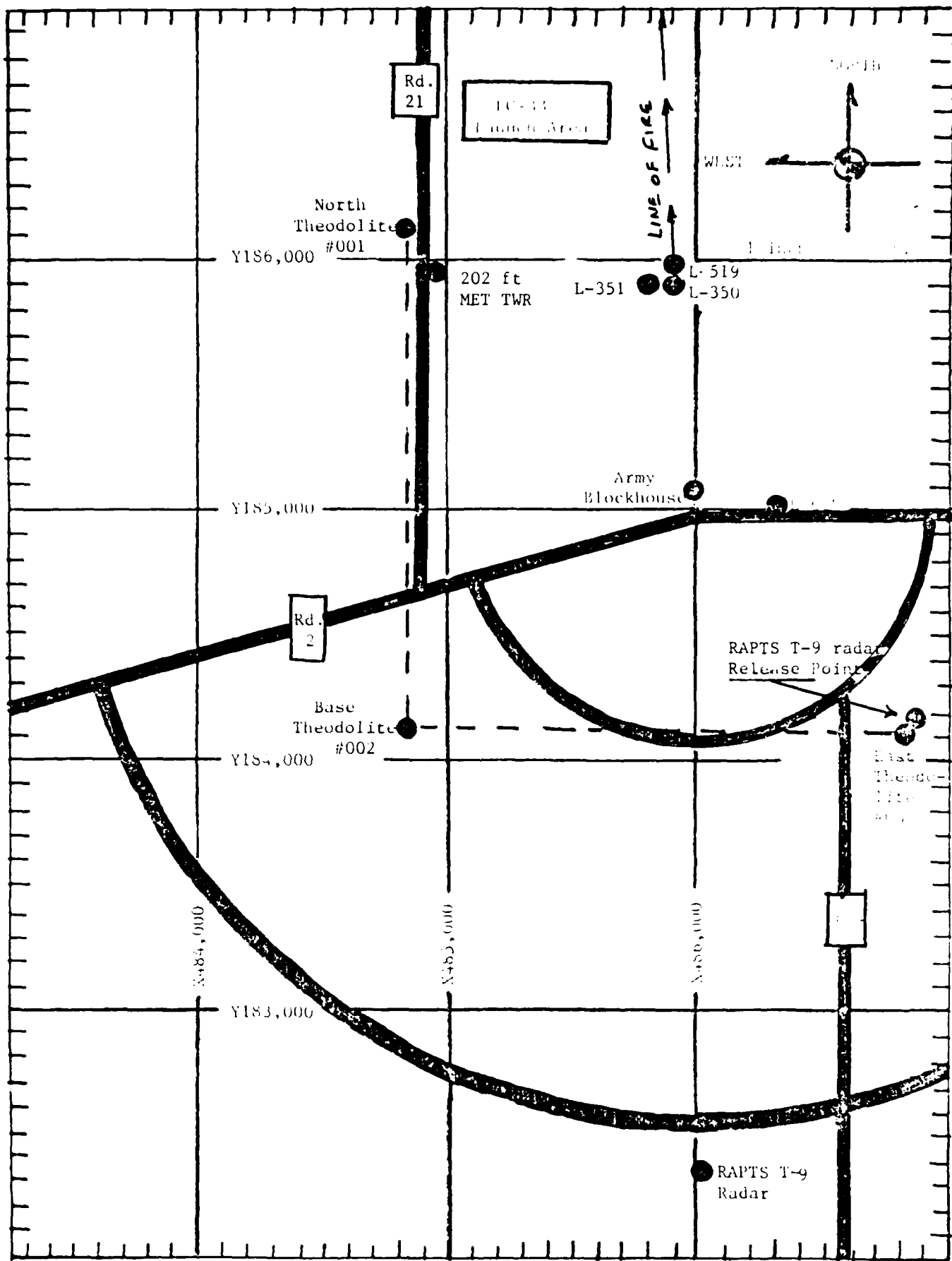
X



A-1

WSMR METEOROLOGICAL SITES





PROJECT SURFACE OBSERVATION

STATION <u>LC-33</u>													
DATE <u>23</u> <u>05</u> <u>84</u>		X= <u>484,982.64</u> Y= <u>185,957.73</u> H= <u>3995.00</u>											
TIME <u>1139</u>		PRESSURE <u>mbs</u>		TEMPERATURE <u>OC</u>		DEW POINT <u>OC</u>		RELATIVE HUMIDITY <u>%</u>		WIND		VISIBILITY	
										SPEED <u>kts</u>		CHARACTER <u>kts</u>	
										DIRECTION <u>degs</u>		IN <u>deg</u>	
1139		885.9		31.9		14.6		35		130		14	

CLOUDS										REMARKS	
OBSERVATIONS TO VISIBILITY		1st LAYER		2nd LAYER		3rd LAYER					
		AMT	TYPE	HGT	AMT	TYPE	HGT	AMT	TYPE	HGT	
		2	CU	7,000							

PSYCHROMETRIC COMPUTATION

TIME: MDT	1139	
DRY BULB TEMP.	31.9	
WET BULB TEMP.	20.0	
WET BULB DEPR.	11.9	
DEW POINT	14.6	
RELATIVE HUMID.	35	

LC-33 METEOROLOGICAL TOWER
ANEMOMETER MEASURED WIND DATA

WSTM COORDINATES X=484,982.64 Y=185,957.73 H=3983.00 (BASE)

TABLE NO. 2

DATE 23 May 84 1139 M D T
DAY MONTH YEAR TIME

LEVEL #1 12 FT AGL			LEVEL #2 62 FT AGL		
T-TIME (SEC)	DIR (DEG)	SPEED (KTS)	T-TIME (SEC)	DIR (DEG)	SPEED (KTS)
T-30	144	13	T-30	116	12
T-20	147	08	T-20	131	11
T-10	106	06	T-10	146	08
T- 0 (1st T)	117	08	T- 0 (1st T)	131	07
T+10	153	11	T+10	130	11
T+20	159	08	T+20	136	11
T+30	154	06	T+30	139	08
T+40			T+40		
T+50			T+50		
T+60			T+60		

LEVEL #3 102 FT AGL			LEVEL #4 202 FT AGL		
T-TIME (SEC)	DIR (DEG)	SPEED (KTS)	T-TIME (SEC)	DIR (DEG)	SPEED (KTS)
T-30	143	13	T-30	116	15
T-20	133	11	T-20	110	12
T-10	142	11	T-10	107	11
T- 0 (1st T)	127	11	T- 0 (1st T)	101	10
T+10	117	11	T+10	125	10
T+20	129	07	T+20	114	08
T+30	133	06	T+30	110	07
T+40			T+40		
T+50			T+50		
T+60			T+60		

TABLE 3

PILOT-BALLOON MEASURED WIND DATA

DATE 23 May 1984

SITE: LC-33
 TIME: 1045 MDT
 WSTM COORDINATES:
 X= 486,037.24
 Y= 182,350.16
 H= 3,997.30

SITE: LC-33
 TIME 1115 MDT
 WSTM COORDINATES:
 X= 486,037.24
 Y= 182,350.16
 H= 3,997.30

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	060	06
150	241	02
210	125	10
270	109	16
330	120	14
390	111	20
500	119	15
650	118	14
800	094	20
950	100	18
1150	107	15
1350	107	10
1550	122	08
1750	136	07
2000	158	07

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	020	08
150	289	02
210	126	14
270	150	12
330	134	12
390	101	19
500	099	16
650	120	12
800	121	15
950	102	16
1150	097	18
1350	132	11
1550	114	11
1750	122	10
2000	146	07

Data obtained from a RAPTS T-9 radar tracked pilot-balloon observations.

TABLE 3 Cont'd

PILOT-BALLOON MEASURED WIND DATA

DATE 23 May 1984

SITE: LC-33
TIME: 1139
WSTM COORDINATES:
X= 486,037.24
Y= 182,350.16
H= 3,997.30

SITE:
TIME
WSTM COORDINATES:
X=
Y=
H=

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	130	14
150	270	01
210	081	12
270	081	11
330	123	06
390	088	16
500	107	15
650	117	11
800	095	14
950	116	15
1150	126	12
1350	135	12
1550	171	12
1750	137	08
2000	156	09

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE		
150		
210		
270		
330		
390		
500		
650		
800		
950		
1150		
1350		
1550		
1750		
2000		

AIMING AND T-TIME COMPUTER MET MESSAGE DATA

23 May 1984

WSD 1000 MDT

METCM1324064

231600122885

00231010 30300885

01209014 30110875

02196015 29840851

03211014 29440813

04228015 28970766

05296008 28650722

06340010 28600682

SMR 1000 MDT

METCM1325064

231600122885

00284010 30340885

01275014 30070875

02264013 29800851

03257012 29400812

04240013 28940766

05304009 28690722

DON 1000 MDT

METCM1326063

231600121884

00249005 30310884

01204010 30180874

02244012 29860849

03241015 29460811

04281010 29000765

05340008 28820721

06370009 28610680

WSD 1139 MDT

METCM1324064

231770122885

00231010 30490885

01238013 30280875

02225020 29950851

03229011 29500813

04238005 29010767

05331007 28730723

06315013 28550681

SMR 1139 MDT

METCM1325064

231770122884

00293012 30780885

01273014 30210875

02256012 29890850

03252011 29500812

04217011 29040766

05263008 28640722

06343010 28570681

DON 1139 MDT

METCM1332063

231770121885

00213010 30710884

01225014 30280874

02252014 29990849

03265008 29570811

04267014 29070765

05105016 28740722

06373029 28570680

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

SIGNIFICANT LEVEL DATA

1440020293
WHITE SANDS

TABLE 5

STATION ALTITUDE 3024.07 FEET MSL
23 MAY 84
ASCENSION NO. 1000 MDT

PRESSURE MILLIBARS	GLOMETRIC ALTITUDE FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
55.4	3799.0	27.8	15.1	46.0
48.7	4233.0	26.2	14.0	47.0
46.5	4547.6	24.6	13.5	50.0
50.0	5157.0	23.2	13.4	54.0
56.6	6050.1	18.8	12.1	65.0
755.0	7474.1	16.2	11.2	72.0
758.4	8386.5	14.3	8.7	69.0
725.1	9077.0	10.8	5.6	75.0
719.4	9844.5	11.2	5.7	67.0
700.4	10270.4	13.1	.8	43.0
700.0	10399.4	13.7	-4.9	27.0
701.3	11214.7	10.6	-7.1	23.0
706.7	11426.3	4.3	-10.9	32.0
700.9	11110.2	-3	-12.5	39.0
706.5	11735.1	-3.6	-23.2	20.0
517.0	14024.4	-5.0	-24.4	20.0
500.0	17556.1	-6.5	-25.7	20.0

UPPER AIR DATA

1440020293
WHITE SANDS

STATION ALTITUDE 3299.33 FEET
03 MAY 54 1000 MDT

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

TABLE 6

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
39.9.1	885.4	27.6	46.0	1017.4	678.3	130.0	9.9	1.000299
4000.0	875.1	27.7	46.0	1017.2	678.2	129.9	9.9	1.000299
4500.0	849.9	24.3	45.5	1010.1	674.8	125.6	11.1	1.000292
5000.0	824.9	23.6	52.9	996.9	673.4	122.1	12.3	1.000299
5500.0	800.1	22.2	56.5	984.1	671.8	119.7	13.5	1.000255
6000.0	775.5	20.7	60.1	971.9	670.1	116.9	14.8	1.000241
6500.0	751.1	19.3	63.8	959.9	668.4	114.0	15.0	1.000277
7000.0	726.9	17.6	69.1	948.5	666.5	120.0	14.7	1.0002.3
7500.0	702.9	16.1	71.8	937.1	664.6	124.2	14.2	1.000268
8000.0	679.3	15.1	70.2	924.0	663.3	128.5	13.4	1.000261
8500.0	655.3	14.0	65.5	911.3	662.0	137.7	12.6	1.000254
9000.0	631.5	12.5	72.0	890.5	660.3	143.8	10.6	1.000249
9500.0	608.5	11.2	74.4	878.0	658.6	157.9	9.2	1.000244
10000.0	585.4	10.0	58.5	870.3	659.2	171.5	8.6	1.000232
10500.0	562.5	8.2	71.3	851.4	660.5	184.7	8.6	1.000212
11000.0	539.9	12.9	27.3	838.3	659.6	190.9	9.0	1.000236
11500.0	517.0	11.9	27.6	826.2	658.4	187.1	9.8	1.000202
12000.0	494.5	10.9	27.9	814.2	657.3	174.0	10.6	1.000198
12500.0	472.1	9.6	28.6	801.0	655.2	166.9	11.6	1.000195
13000.0	449.4	8.3	29.5	797.1	654.2	159.1	12.8	1.000192
13500.0	427.0	7.0	30.3	783.4	652.6	151.5	12.8	1.000189
14000.0	404.9	5.5	31.2	770.8	651.0	143.9	13.0	1.000186
14500.0	383.6	4.3	32.0	768.4	649.4	136.6	13.1	1.000182
15000.0	362.5	3.0	34.2	750.1	647.8	129.6	13.3	1.000180
15500.0	341.4	1.4	36.4	740.0	645.1	125.0	13.6	1.000177
16000.0	320.5	0.0	38.5	730.0	644.4	120.0	13.5	1.000175
16500.0	299.5	-1.1	40.4	713.3	643.0	122.9	13.4	1.000170
17000.0	278.5	-2.1	42.6	702.5	641.7	136.4	11.8	1.000166
17500.0	257.5	-3.1	42.7	691.9	640.4	147.9	10.4	1.000161
18000.0	236.5	-4.1	40.0	680.9	639.4			1.000158
18500.0	215.5	-5.1	38.0	670.6	638.5			1.000155
19000.0	194.5	-6.1	36.0	660.7	637.5			1.000152
19500.0	173.5	-7.1	34.0	650.0	636.5			1.000150

STATION ALTITUDE 20,000 FEET
23 MAY 84
ASCENSION NO. 493

MANDATORY LEVELS
140002029Y
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 7

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DWPOINT CENTIGRADE	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
950.0	5147.	23.2	13.4	54.	121.1	12.7	
900.0	6404.	18.0	11.8	67.	120.2	14.8	
750.0	8608.	13.4	8.2	70.	137.2	11.8	
700.0	10500.	13.7	-4.0	77.	187.1	8.6	
650.0	12641.	9.3	-7.9	29.	164.6	11.9	
600.0	14775.	3.5	-11.2	33.	137.6	13.2	
550.0	17065.	-2.1	-18.4	28.	137.9	11.6	
500.0	19528.	-6.5	-25.7	20.			

GEODETIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

SIGNIFICANT LEVEL DATA

144000ZJ055
C M R

TABLE 8

STATION ALTITUDE 2027.72 FEET MSL
25 MAY 84 1000 MDT
ASCENSION NO. 53

PRESSURE MILLIBARS	GLOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE		REL. HUM. PERCENT
		AIR	DEWPOINT	
835.2	2907.3	28.3	16.9	50.0
832.4	4384.5	26.4	12.5	42.0
850.0	5167.7	22.8	12.4	52.0
810.4	6375.5	18.8	11.6	63.0
756.2	8463.9	13.2	11.1	87.0
747.2	9705.7	12.6	11.7	94.0
720.6	9796.4	11.4	6.1	70.0
719.0	9305.9	12.2	.3	44.0
711.9	10131.6	13.9	-5.3	26.0
700.0	10597.5	13.0	-6.5	25.0
677.9	11481.0	11.8	-7.1	26.0

STATION ALTITUDE 3927.75 FEET MSL
 23 MAY 84
 ASCENSION NO. 23

UPPER AIR DATA
 144000Z0055
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

TABLE 9

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	TEMPERATURE WET-BULB DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
3927.7	685.4	29.3	16.9	50.0	1014.5	679.2	160.0	9.9	1.000306
4000.0	685.1	28.0	15.8	49.8	1014.7	679.1	160.0	9.9	1.000306
4500.0	659.9	25.0	12.5	45.8	1007.9	674.9	156.1	10.4	1.000297
5000.0	655.0	23.4	12.5	51.4	998.0	673.0	152.7	10.9	1.000295
5500.0	640.1	21.3	12.3	54.7	985.8	671.3	149.5	11.4	1.000292
6000.0	625.5	20.3	12.0	53.7	973.5	669.6	146.6	12.0	1.000279
6500.0	611.1	19.7	11.0	62.8	961.4	667.9	144.3	12.4	1.000275
7000.0	596.2	17.4	11.7	62.9	949.0	666.3	142.1	12.4	1.000273
7500.0	582.7	16.0	11.6	75.1	936.8	664.6	140.0	12.5	1.000271
8000.0	568.0	14.5	11.4	81.3	924.8	663.0	141.9	12.1	1.000268
8500.0	553.2	13.1	11.2	87.8	912.9	661.4	145.9	11.6	1.000265
9000.0	541.7	12.4	10.0	89.1	898.1	660.4	150.1	11.1	1.000260
9500.0	528.4	11.3	7.9	77.1	885.7	659.4	161.1	10.3	1.000247
10000.0	515.2	13.0	-1.7	36.0	868.5	659.9	173.6	10.0	1.000218
10500.0	502.5	13.4	-6.3	35.2	852.9	659.9			1.000208
11000.0	489.8	12.5	-9.0	35.5	839.7	659.0			1.000204

STATION ALTITUDE 2097.00 FEET MSL
 23 MAY 64
 ASCENSION NO. 55

MANDATORY LEVELS
 1440060055
 S M R

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

TABLE 10

PRESSURE & POTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE	PERCENT		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5166.	22.8	12.4	52.		151.6	11.0
800.0	6034.	17.9	11.7	67.		142.5	12.4
750.0	6634.	12.8	11.5	92.		147.4	11.4
700.0	10537.	13.0	-6.5	25.			

GEODETIC COORDINATES
37.57209 LAT DEG
106.29459 LON DEG

SIGNIFICANT LEVEL DATA
1440.00008
0.00

TABLE 11

STATION ALTITUDE 4000.00 FEET MSL
23 MAY 84
ASCENSION NO. 2

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MIL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
185.6	4005.7	28.1	14.0	42.0
189.8	4404.8	26.3	12.0	41.0
199.7	5176.1	23.6	11.0	45.0
255.7	5025.6	22.1	10.7	49.0
278.4	5972.9	18.5	10.1	58.0
289.7	7217.2	17.0	9.2	60.0
290.0	9445.3	12.7	6.1	64.0
290.0	9626.0	14.4	1.7	42.0
293.8	10049.3	15.5	-5.7	21.0
290.2	10364.2	14.4	-7.0	22.0
346.1	10773.1	9.0	-8.5	28.0

STATION ALTITUDE 4003.69 FEET MSL
23 MAY 84
ASCENSION NO. 6 1000 MDT

UPPER AIR DATA
1440Z000JR
00P

GEODETIC COORDINATES
32.57209 LAT DEG
106.29439 LONG DEG

TABLE 12

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
4033.7	32.6	20.1	42.0	1014.8	678.5	140.0	5.1	1.000293
4500.0	36.6	26.3	41.0	1004.4	676.2	139.5	7.4	1.000293
5000.0	39.7	24.6	44.2	994.4	673.7	139.2	9.8	1.000279
5500.0	42.9	22.3	48.0	983.8	671.8	139.0	12.2	1.000276
6000.0	46.4	21.1	51.6	973.3	670.2	138.1	13.9	1.000273
6500.0	50.0	19.7	55.1	957.9	668.6	135.3	14.1	1.000269
7000.0	53.3	18.1	58.5	946.4	666.8	137.0	13.1	1.000265
7500.0	57.7	15.3	60.5	935.2	664.8	140.9	11.8	1.000260
8000.0	61.3	13.3	61.4	921.8	663.6	155.2	10.8	1.000255
8500.0	65.4	14.3	63.3	908.5	662.5	169.0	10.2	1.000250
9000.0	69.7	13.0	67.2	895.5	661.3	178.3	9.2	1.000245
9500.0	73.5	11.9	68.9	881.7	660.5	137.6	8.3	1.000239
10000.0	77.6	10.3	70.7	861.1	662.4	197.1	7.4	1.000212
10500.0	81.3	16.3	71.9	848.2	661.4	204.8	7.8	1.000206
11000.0	85.2	13.3	73.2	836.4	660.0	200.0	8.6	1.000203
11500.0	89.7	12.1	74.5	824.9	658.6	205.3	9.2	1.000200
12000.0	94.5	10.7	75.9	811.5	657.2			1.000197
12500.0	99.3	9.7	77.3	802.3	655.8			1.000194

STATION ALTITUDE 4033.69 FEET ASL
 25 MAY 84 1000 MDT
 ASCENSION NO. 3

MANDATORY LEVELS
 144020000R
 DUH

GEODETTIC COORDINATES
 32.57209 LAT DEG
 106.29439 LON DEG

TABLE 13

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS		AIR		DEWPOINT		DIRECTION	
		DEGREES		CENTIGRADE		DEGREES(TN)	
FEET						SPEED	
						KNOTS	
257.0	3122.	23.6	11.0	45.	139.1	10.4	
800.0	6947.	18.7	10.1	48.	136.0	13.5	
757.0	3650.	14.2	7.2	63.	171.7	9.9	
700.0	10562.	14.4	-7.0	22.	205.6	7.9	
650.0	12596.	9.4	-8.4	28.			

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

SIGNIFICANT LEVEL DATA

1740020294
WHITE SANDS

TABLE 14

STATION ALTITUDE 3942.03 FEET MSL
23 MAY 84 1139 MDT
ASCENSION NO. 294

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEW POINT CENTIGRADE	
265.7	3949.0	29.7	14.3	39.0
275.1	4320.8	27.0	15.4	49.0
463.3	4722.0	26.3	15.4	51.0
450.0	5170.3	24.1	13.6	52.0
742.8	7155.9	18.1	10.7	62.0
752.8	8674.3	14.2	9.2	72.0
743.9	8973.6	13.4	8.7	73.0
722.7	9786.3	12.2	6.5	68.0
719.1	10222.9	14.1	.0	38.0
700.0	10619.3	13.7	-4.9	27.0
455.7	12432.7	9.6	-6.3	32.0
442.1	17195.7	-2.9	-20.1	25.0
500.0	17369.7	-7.3	-25.8	21.0
400.0	25145.1	-20.5	-35.7	24.0
500.0	31909.6	-38.1	-48.0	34.0
392.2	33505.1	-39.5	-49.0	35.0
379.7	37492.1	-40.6		
354.0	35278.3	-46.1		
300.0	35963.8	-47.7		
300.0	40696.7	-59.2		
170.3	45966.4	-66.5		
166.9	45583.0	-69.7		
152.5	46142.1	-69.5		
151.2	46311.7	-66.7		
150.0	46470.2	-67.5		
155.5	48370.7	-69.0		
151.2	49106.5	-66.9		
117.7	51272.7	-69.3		
113.8	52114.0	-67.5		
105.7	53216.4	-68.4		
100.0	54499.6	-68.4		
91.8	55508.3	-67.3		
72.7	59516.3	-64.1		
70.0	61511.1	-63.2		
59.5	61934.8	-62.8		
51.7	67620.7	-59.0		
50.1	68514.0	-58.3		
50.3	70299.0	-51.3		
45.8	67555.2	-47.5		
20.0	81155.4	-45.1		

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37333 LON DEG

SIGNIFICANT LEVEL DATA

1440070294
 WHITE SANDS

TABLE 14 Cont'd

STATION ALTITUDE 39,900 FEET MSL
 23 MAY 94 1139 MDT
 ASCENSION NO. 294

PRESSURE MILLIBARS MSL FEET	GLOMETRIC ALTITUDE		TEMPERATURE		REL. HUM. PERCENT
	ALTITUDE		AIR	DEWPOINT	
	DEGREES CENTIGRADE				
15.5	9531.4		-42.0		
14.5	9514.6		-39.0		
13.7	9765.1		-38.6		

UPPER AIR DATA
1440020294
WHITE SANDS

STATION ALTITUDE 1000.0 FEET MSL
25 MAY 84
ASCENSION NO. 294

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LONG DEG

TABLE 15

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	SPEED KNOTS	INDEX OF REFRACTION
3900.0	885.0	29.7	35.0	1011.3	680.3	130.0	9.9	1.000293
4000.0	885.0	29.6	35.3	1011.2	680.2	130.0	9.9	1.000293
4500.0	869.9	26.7	44.9	1007.0	677.2	129.4	10.9	1.000297
5000.0	855.0	24.9	51.6	997.0	675.1	124.8	11.8	1.000291
5500.0	840.2	23.1	51.7	981.3	672.3	128.4	12.8	1.000284
6000.0	825.6	21.6	56.2	962.3	671.1	128.0	13.7	1.000279
6500.0	811.3	20.1	58.7	957.6	669.3	126.7	11.5	1.000274
7000.0	797.1	18.6	61.2	946.0	667.5	124.2	8.5	1.000269
7500.0	783.1	17.2	44.3	937.9	665.8	124.1	6.2	1.000265
8000.0	769.2	15.9	47.7	921.7	664.3	134.7	5.2	1.000261
8500.0	755.5	14.5	71.2	902.7	662.7	152.0	5.0	1.000257
9000.0	742.2	13.4	8.0	897.3	661.3	169.0	5.7	1.000252
9500.0	728.9	12.6	69.5	884.0	660.3	178.2	6.9	1.000244
10000.0	715.6	11.4	51.7	867.2	660.6	184.0	8.2	1.000230
10500.0	703.0	10.8	30.3	851.2	660.8	182.7	10.0	1.000212
11000.0	690.4	10.3	28.0	839.0	659.6	160.5	11.8	1.000206
11500.0	677.7	11.7	35.4	827.2	658.3	175.0	13.4	1.000203
12000.0	665.7	10.6	30.8	815.5	656.9	170.0	14.9	1.000210
12500.0	653.2	9.4	31.9	804.1	655.6	168.0	14.5	1.000197
13000.0	641.3	8.1	31.2	793.0	654.0	165.0	14.1	1.000193
13500.0	629.6	6.8	30.4	782.0	652.4	162.2	13.3	1.000189
14000.0	617.9	5.5	25.7	771.3	650.8	158.0	12.6	1.000185
14500.0	606.4	4.2	29.0	760.4	649.2	150.5	12.9	1.000181
15000.0	595.1	2.9	25.2	750.1	647.7	143.2	13.3	1.000178
15500.0	584.1	1.6	27.5	739.9	646.1	136.5	14.2	1.000174
16000.0	573.2	0.2	26.8	729.7	644.5	134.4	14.6	1.000171
16500.0	562.3	-1.1	26.0	719.6	642.9	140.8	13.8	1.000168
17000.0	552.1	-2.4	25.3	709.8	641.3	148.4	12.6	1.000165
17500.0	541.7	-3.5	24.5	699.2	640.0	161.0	10.8	1.000162
18000.0	531.3	-4.7	23.6	688.2	638.9	173.0	9.2	1.000159
18500.0	521.1	-5.3	22.8	677.4	637.8	186.0	7.3	1.000156
19000.0	511.1	-6.2	22.0	666.7	636.7	201.5	6.2	1.000153
19500.0	501.2	-7.1	21.1	656.3	635.5	217.0	5.8	1.000150
20000.0	491.4	-8.3	21.2	646.1	634.2	225.2	5.7	1.000148
20500.0	481.7	-9.3	21.5	636.2	632.7	224.4	5.4	1.000145
21000.0	472.2	-10.7	21.8	626.4	631.3	224.0	5.4	1.000143
21500.0	462.3	-11.9	22.0	616.8	629.9	226.4	5.5	1.000140
22000.0	453.6	-13.1	22.3	607.4	628.4	227.0	6.3	1.000138
22500.0	444.7	-14.2	22.6	598.1	627.0	220.0	7.5	1.000136
23000.0	435.7	-15.4	23.0	589.9	625.5	210.0	8.4	1.000134

UPPER AIR DATA
1440020294
WHITE SANDS

STATION ALTITUDE 20,000 FEET MSL
22 MAY 84
ASCENSION NO. 294

1139 MDT

TABLE 15 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
23500.0	427.2	-16.0	23.1	579.9	624.1	199.3	9.5	1.000131
24000.0	418.5	-17.5	23.4	571.1	622.6	191.2	9.3	1.000129
24500.0	410.3	-19.0	23.7	562.4	621.2	182.8	8.9	1.000127
25000.0	402.3	-20.5	23.9	553.8	619.7	178.0	8.4	1.000125
25500.0	394.0	-21.4	24.5	545.1	618.2	173.5	8.0	1.000123
26000.0	385.7	-22.7	25.3	536.4	616.6	170.6	7.8	1.000121
26500.0	377.0	-24.0	26.0	527.9	615.0	167.7	7.6	1.000119
27000.0	369.7	-25.3	26.7	519.5	613.4	165.1	7.6	1.000117
27500.0	361.9	-26.5	27.5	511.3	611.7	162.5	7.7	1.000115
28000.0	354.3	-27.9	28.2	503.2	610.1	164.6	7.6	1.000113
28500.0	346.8	-29.2	29.0	495.2	608.5	167.5	7.5	1.000111
29000.0	339.5	-30.5	29.7	487.4	606.9	169.0	7.0	1.000109
29500.0	332.4	-31.0	30.4	479.7	605.2	170.4	6.5	1.000108
30000.0	325.4	-33.1	31.2	472.2	603.6	172.3	6.5	1.000106
30500.0	318.5	-34.4	31.9	464.8	602.0	174.3	6.6	1.000104
31000.0	311.8	-35.7	32.7	457.5	600.5	181.7	5.6	1.000103
31500.0	305.3	-37.0	33.4	450.4	599.7	190.4	6.7	1.000101
32000.0	298.8	-38.3	34.2	443.2	597.0	194.6	7.1	1.000099
32500.0	292.3	-39.5	35.0	435.7	595.5	197.4	7.6	1.000098
33000.0	285.8	-40.1	35.6	427.2	594.8	197.4	8.3	1.000095
33500.0	279.3	-40.5	36.4	418.8	594.0	195.9	9.2	1.000093
34000.0	273.3	-42.2	37.1	412.2	592.1	197.0	9.4	1.000092
34500.0	267.2	-43.7	37.4	405.7	590.1	201.9	9.3	1.000090
35000.0	261.3	-45.2	38.2	399.3	588.1	207.0	9.3	1.000089
35500.0	255.4	-46.5	38.9	392.7	586.4	212.6	9.4	1.000087
36000.0	249.6	-47.8	39.5	385.8	584.8	213.4	10.4	1.000086
36500.0	243.8	-49.0	40.2	379.9	583.3	212.2	11.8	1.000084
37000.0	238.1	-50.2	40.9	372.1	581.7	209.5	13.8	1.000083
37500.0	232.5	-51.4	41.6	365.4	580.1	204.8	16.2	1.000081
38000.0	227.1	-52.0	42.3	358.6	578.5	205.2	18.2	1.000080
38500.0	221.8	-53.4	43.0	352.4	576.9	204.1	20.0	1.000078
39000.0	216.7	-55.1	43.7	346.1	575.3	203.3	21.4	1.000077
39500.0	211.5	-55.5	44.4	339.0	573.7	202.7	22.3	1.000076
40000.0	206.7	-57.2	45.1	333.0	572.1	202.8	23.4	1.000074
40500.0	201.9	-58.7	45.8	327.0	570.5	197.7	24.7	1.000073
41000.0	197.0	-59.9	46.5	321.8	568.9	195.7	25.9	1.000072
41500.0	192.3	-61.1	47.2	316.7	567.4	193.5	26.0	1.000070
42000.0	187.5	-62.1	47.9	311.6	565.9	193.5	27.8	1.000069
42500.0	182.8	-63.2	48.6	306.5	564.4	197.7	28.7	1.000068
43000.0	178.3	-64.4	49.3	301.9	562.9	201.7	29.6	1.000066

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

UPPER AIR DATA
1440000Z94
WHITE SANDS

STATION ALTITUDE 3000 FEET MSL
22 MAY 84
ASCENSION NO. 294

TABLE 15 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
435.00.0	174.0	-65.5		297.2	561.4	205.7	30.4	1.000045
440.00.0	170.0	-66.0		264.6	559.9	209.5	31.0	1.000044
445.00.0	165.7	-67.6		240.8	558.6	212.1	29.4	1.000043
450.00.0	161.6	-69.0		215.1	557.2	215.1	27.8	1.000041
455.00.0	157.6	-69.5		203.6	555.9	220.0	25.2	1.000040
460.00.0	152.6	-69.0		202.8	555.9	228.0	22.9	1.000039
465.00.0	147.8	-67.5		251.7	556.6	238.2	20.8	1.000037
470.00.0	146.0	-67.9		247.9	558.1	250.4	19.5	1.000035
475.00.0	142.4	-68.3		242.2	557.6	256.7	18.1	1.000034
480.00.0	136.8	-68.7		226.6	557.0	262.1	16.7	1.000033
485.00.0	133.4	-68.6		230.5	557.2	263.1	15.6	1.000031
490.00.0	128.0	-67.2		223.3	559.1	262.2	14.6	1.000030
495.00.0	123.7	-67.3		217.9	558.9	264.4	14.0	1.000049
500.00.0	125.5	-67.9		211.0	558.1	269.2	13.7	1.000047
505.00.0	122.4	-68.4		208.3	557.4	275.7	13.2	1.000046
510.00.0	119.3	-69.0		203.6	556.6	285.7	12.3	1.000045
515.00.0	116.4	-68.6		198.4	556.9	295.0	11.6	1.000044
520.00.0	113.5	-67.7		192.4	558.3	299.6	10.5	1.000043
525.00.0	110.6	-67.8		187.7	558.2	304.1	9.5	1.000042
530.00.0	107.9	-68.2		182.4	557.7	299.4	8.6	1.000041
535.00.0	105.2	-68.4		179.0	557.5	293.7	7.9	1.000040
540.00.0	102.6	-68.4		174.5	557.5	304.1	7.1	1.000039
545.00.0	100.0	-68.4		170.1	557.5	312.7	6.7	1.000038
550.00.0	97.3	-68.3		165.8	557.6	319.7	6.4	1.000037
555.00.0	95.1	-68.1		161.6	557.6	315.1	6.0	1.000036
560.00.0	92.7	-68.2		157.4	558.0	303.9	5.2	1.000035
565.00.0	90.4	-67.9		153.4	558.2	274.5	5.0	1.000034
570.00.0	88.0	-67.7		149.5	558.4	254.8	5.6	1.000033
575.00.0	85.0	-67.6		145.7	558.5	250.0	6.0	1.000032
580.00.0	82.8	-67.2		142.0	558.7	245.0	6.5	1.000032
585.00.0	81.7	-67.5		139.4	558.9	235.3	7.3	1.000031
590.00.0	79.7	-65.9		134.0	560.8	227.7	8.2	1.000030
595.00.0	77.5	-66.1		129.6	563.2	221.3	7.0	1.000029
600.00.0	75.9	-65.9		124.3	563.6	214.1	7.6	1.000028
605.00.0	74.0	-65.7		121.1	563.8	211.1	6.4	1.000027
610.00.0	72.5	-65.5		120.0	564.1	207.4	5.0	1.000027
615.00.0	70.3	-65.3		116.9	564.4	194.0	4.4	1.000026
620.00.0	68.7	-65.1		114.0	564.5	180.4	4.3	1.000025
625.00.0	67.1	-65.1		111.3	564.6	167.9	4.4	1.000025
630.00.0	65.4	-65.1		107.6	564.7	145.5	5.8	1.000024

UPPER AIR DATA
1440020294
WHITE SANDS

STATION ALTITUDE 200.00 FEET "SL"
22 MAY 84
1139 MDT
ASCENSION NO. 294

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 15 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC CM	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
625.00.0	62.9	-63.1		105.8	564.8	139.1	7.7	1.000024
640.00.0	62.3	-62.9		105.2	564.9	129.6	9.7	1.000023
645.00.0	60.6	-62.9		100.7	565.0	123.5	10.5	1.000022
650.00.0	59.3	-62.7		98.2	565.1	120.6	10.3	1.000022
655.00.0	57.9	-62.1		95.5	566.0	118.4	8.9	1.000021
660.00.0	56.5	-61.4		92.9	566.9	116.0	7.1	1.000021
665.00.0	55.1	-60.7		90.4	567.8	115.1	5.4	1.000020
670.00.0	53.5	-60.1		88.0	568.7	117.4	.2	1.000020
675.00.0	52.5	-59.4		85.6	569.5	73.4	1.1	1.000019
680.00.0	51.3	-58.9		83.4	570.2	84.9	3.3	1.000019
685.00.0	50.0	-58.3		81.3	570.4	97.5	6.4	1.000018
690.00.0	48.9	-58.5		79.3	570.8	102.4	10.3	1.000018
695.00.0	47.7	-58.2		77.3	571.2	104.4	13.6	1.000017
700.00.0	46.0	-57.8		75.4	571.7	101.0	12.8	1.000017
705.00.0	45.5	-57.5		73.5	572.1	101.4	12.1	1.000016
710.00.0	44.4	-57.2		71.7	572.5	103.6	11.3	1.000016
715.00.0	43.4	-56.9		69.9	572.9	109.7	10.6	1.000016
720.00.0	42.4	-56.5		68.2	573.4	116.7	9.9	1.000015
725.00.0	41.4	-56.2		66.5	573.8	126.7	9.8	1.000015
730.00.0	40.4	-55.9		64.8	574.2	136.1	9.9	1.000014
735.00.0	39.5	-55.0		63.2	574.7	140.7	9.8	1.000014
740.00.0	38.5	-55.2		61.6	575.1	132.6	8.9	1.000014
745.00.0	37.0	-54.9		60.1	575.5	131.7	8.1	1.000013
750.00.0	36.2	-54.6		58.6	575.9	123.0	6.7	1.000013
755.00.0	35.9	-54.3		57.1	576.4	121.2	5.1	1.000013
760.00.0	35.1	-53.9		55.7	576.8	117.1	3.6	1.000012
765.00.0	34.2	-53.0		54.3	577.2	127.2	1.8	1.000012
770.00.0	33.4	-53.3		53.0	577.7	206.7	.6	1.000012
775.00.0	32.7	-52.0		51.7	578.1	282.7	.5	1.000012
780.00.0	31.9	-52.0		50.4	578.5	22.4	1.0	1.000011
785.00.0	31.1	-52.3		49.1	578.9	34.4	2.1	1.000011
790.00.0	30.4	-52.0		47.9	579.4	55.0	3.5	1.000011
795.00.0	29.7	-51.7		46.7	580.0	62.6	5.1	1.000010
800.00.0	29.0	-50.9		45.5	580.8	65.5	6.3	1.000010
805.00.0	28.4	-50.2		44.3	581.7	65.8	6.7	1.000010
810.00.0	27.7	-49.5		43.2	582.5	65.1	7.0	1.000010
815.00.0	27.1	-48.9		42.1	583.4	68.6	7.1	1.000009
820.00.0	26.5	-48.3		41.0	584.3	72.7	7.0	1.000009
825.00.0	25.9	-47.6		39.9	585.1	77.0	6.9	1.000009
830.00.0	25.3	-47.5		38.0	585.5	87.1	7.2	1.000009

UPPER AIR DATA
1440020294
WHITE SANDS

STATION ALTITUDE 5010.00 FEET MSL
23 MAY 84 1139 MDT
ASCENSION NO. 294

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 15 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	DEWPOINT DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
63500.0	24.7	-47.1			39.1	585.7	96.8	7.8	1.000008
64000.0	24.2	-46.9			37.2	586.0	104.8	8.6	1.000008
64500.0	23.0	-46.7			36.3	586.3	107.7	9.4	1.000008
65000.0	22.1	-46.5			35.5	586.6	109.7	10.1	1.000008
65500.0	22.0	-46.4			34.6	586.8	111.4	10.9	1.000008
66000.0	21.6	-46.0			33.8	587.1	109.7	11.5	1.000008
66500.0	21.6	-45.0			33.0	587.4	107.7	12.2	1.000007
67000.0	21.1	-45.0			32.3	587.7	105.9	12.9	1.000007
67500.0	20.6	-45.4			31.5	588.0	104.6	13.7	1.000007
68000.0	20.1	-45.0			30.8	588.2	103.5	14.5	1.000007
68500.0	19.7	-44.9			30.1	588.6	102.6	15.3	1.000007
69000.0	19.3	-44.0			29.4	586.9	105.1	15.2	1.000007
69500.0	18.6	-44.4			28.7	589.3	108.7	15.0	1.000006
70000.0	18.4	-44.1			28.0	589.6	112.3	14.9	1.000006
70500.0	18.0	-43.6			27.3	590.0	113.0	14.1	1.000006
71000.0	17.6	-43.5			26.7	590.3	113.1	13.2	1.000006
71500.0	17.2	-43.5			26.1	590.7	113.1	12.3	1.000006
72000.0	16.9	-43.0			25.5	591.0	116.7	12.5	1.000006
72500.0	16.5	-42.7			24.9	591.4	120.7	13.1	1.000006
73000.0	16.1	-42.5			24.3	591.7	124.4	13.8	1.000005
73500.0	15.7	-42.2			23.7	592.1	124.6	13.3	1.000005
74000.0	15.4	-41.5			23.1	592.9	123.9	12.5	1.000005
74500.0	15.0	-40.0			22.5	594.8	123.3	11.7	1.000005
75000.0	14.7	-38.5			21.9	596.7			1.000005
75500.0	14.4	-38.1			21.3	597.3			1.000005
76000.0	14.1	-38.6			20.9	597.2			1.000005
76500.0	13.8	-38.3			20.4	597.0			1.000005
77000.0	13.5	-38.4			20.0	596.8			1.000004
77500.0	13.2	-38.4			19.6	596.7			1.000004

STATION ALTITUDE 2000.0 FEET "SL" MANDATORY LEVELS
 23 MAY 84 1139 MDT 1440020294
 ASCENSION HG. 59 WHITE SANDS

GEOGETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

TABLE 16

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIPAS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	5167.	24.1	17.6	52.	128.7	12.1
830.0	6895.	18.9	11.1	61.	124.8	9.1
750.0	8702.	14.0	9.1	72.	150.5	5.2
700.0	10609.	13.7	-4.9	27.	167.4	10.4
650.0	12540.	9.0	-6.9	32.	167.1	14.4
600.0	14793.	3.4	-13.1	29.	144.0	13.1
550.0	17037.	-2.7	-19.9	25.	150.5	12.2
500.0	19541.	-7.3	-25.8	21.	218.9	5.8
450.0	22207.	-13.5	-30.4	22.	222.0	6.8
400.0	25102.	-20.5	-35.7	24.	176.9	8.3
350.0	28297.	-28.7	-41.2	29.	166.6	7.5
300.0	31845.	-38.1	-48.0	34.	194.0	7.0
250.0	35886.	-47.7			211.6	10.2
200.0	40597.	-59.2			196.7	25.2
175.0	43304.	-65.3			204.9	10.2
150.0	46344.	-67.5			237.0	21.0
125.0	49939.	-68.0			269.7	13.7
100.0	54331.	-68.4			316.9	6.7
80.0	58735.	-66.2			229.0	8.0
70.0	61419.	-63.2			193.9	4.3
60.0	64532.	-62.8			121.5	11.1
50.0	68256.	-58.8			97.2	6.3
40.0	72865.	-55.7			133.7	10.0
30.0	78950.	-51.9			50.5	4.3
25.0	82873.	-47.2			91.2	7.5
20.0	87740.	-45.1			101.2	14.6
10.0	94096.	-39.8			121.2	11.7

GEODETIC COORDINATES
 52.48034 LAT DEG
 106.42107 LON DEG

SIGNIFICANT LEVEL DATA
 1440060056
 S M R

STATION ALTITUDE 2907.7 FEET MSL
 23 MAY 84 1139 MDT
 ASCENSION NO. 55

TABLE 17

PRESSURE MILLIBARS MSL FEET	GEOMETRIC ALTITUDE	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DENPOINT CENTIGRADE	
864.9	7997.3	32.2	16.5	39.0
878.5	8210.0	26.7	10.4	36.0
890.0	8426.4	24.0	11.3	45.0
895.6	8617.6	18.3	9.6	57.0
734.2	9289.8	12.4	9.7	78.0
709.3	1079.7	10.6	4.5	66.0
700.0	10003.0	12.6	-6	40.0
696.3	10749.2	13.0	-6.5	25.0
680.1	11526.0	12.3	-7.7	24.0
612.9	14220.9	4.1	-10.3	34.0

STATION ALTITUDE 12,775.0 FEET MSL
25 MAY 80 1139 MDT
ASCENSION NO. 1139 MDT

UPPER AIR DATA
144000056
S W R

GEODETIC COORDINATES
32-48.334 LAT DEG
106-42.307 LON DEG

TABLE 18

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM ³ WATER	SPEED OF SOUND KNOTS	WIND DATA DIR FCTN DEGR FES (TN)	SPEED KNOTS	INDEX OF REFRACTION
1977.3	884.9	32.2	79.0	1001.5	683.5	165.0	12.0	1.000300
4979.0	624.3	24.1	79.0	1001.6	683.4	165.0	12.0	1.000299
4500.0	649.7	25.7	78.7	1007.5	675.6	160.0	11.8	1.000279
5000.0	654.3	24.5	43.5	994.7	674.1	154.0	11.6	1.000279
5500.0	640.0	23.0	47.1	987.1	672.5	149.7	11.6	1.000276
6000.0	595.4	21.2	50.1	969.9	670.8	144.4	11.6	1.000275
6500.0	511.0	20.1	53.2	957.8	669.1	139.4	11.5	1.000269
7000.0	445.9	18.3	56.3	945.9	667.4	135.4	11.1	1.000265
7500.0	382.0	17.3	60.7	933.6	665.8	131.4	10.8	1.000262
8000.0	326.7	15.7	64.5	921.3	664.3	130.2	10.4	1.000259
8500.0	265.3	14.5	70.4	909.2	662.7	128.0	10.0	1.000256
9000.0	201.9	13.4	75.2	897.3	661.2	135.3	9.0	1.000253
9500.0	138.6	12.3	75.4	885.2	659.7	145.7	8.1	1.000247
10000.0	73.5	11.1	69.4	873.6	653.4	157.3	7.5	1.000248
10500.0	72.6	12.0	46.3	855.4	659.0	170.0	8.1	1.000232
11000.0	690.0	12.7	74.0	839.1	659.4	190.5	9.0	1.000204
11500.0	677.5	12.0	74.4	824.2	658.5	181.5	10.1	1.000210
12000.0	665.2	12.6	76.1	815.2	656.8	179.4	11.2	1.000197
12500.0	653.0	9.1	77.9	806.5	655.1	174.0	12.3	1.000195
13000.0	641.1	7.6	78.7	793.9	653.4			1.000192
13500.0	629.4	6.2	71.4	763.5	651.7			1.000189
14000.0	617.7	4.7	73.2	773.3	650.0			1.000186

STATION ALTITUDE 1097.75 FEET MSL
 23 MAY 54
 ASCENSION HC. 50

MANUJATORY LEVELS
 1440JAD056
 5 M 8

GEODETIC COORDINATES
 32.48334 LAT DEG
 106.42307 LON DEG

TABLE 19

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR	DEWPOINT	PERCENT		DIRECTION	SPEED
		DEGREES CENTIGRADE				DEGREES (TN)	KNOTS
55.00	5150.	24.0	11.3	45.		157.2	11.6
90.00	6485.	19.0	9.9	56.		136.4	11.2
75.00	6492.	14.0	9.1	72.		130.2	9.7
700.0	10497.	12.6	-0.6	43.		177.2	8.3
650.0	12677.	9.7	-8.7	28.			

STATION ALTITUDE 4000.0 FEET MSL
23 MAY 84
ASCENSION NO. 9

SIGNIFICANT LEVEL DATA
1440200009
R0W

GEODETIC COORDINATES
37.57209 LAT DEG
104.29439 LON DEG

TABLE 20

PRESSURE GEOMETRIC ALTITUDE	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
4003.7	31.5	15.9	19.0
4180.1	27.9	10.1	33.0
5105.7	25.2	11.0	41.0
7517.4	17.4	8.8	57.0
9667.3	12.1	7.4	73.0
9962.3	11.9	5.1	63.0
10437.5	14.4	-5.9	24.0
10583.6	13.8	-6.4	24.0
12604.7	9.0	-7.4	30.0

STATION ALTITUDE 4000.69 FEET MSL
23 MAY 64
ASCENSION NO. 9 1139 MDT

UPPER AIR DATA
1440200009
NON

GEODETIC COORDINATES
32.57209 LAT DFG
106.29439 LON DEG

TABLE 21

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREE CENTIGRADE	REL. HUM. PERCENT	WIND DIRECTION DEGREES (TN)	SPEED OF SOUND KNOTS	INDEX OF REFRACTION
4003.7	83.6	11.5	19.0	120.0	9.9	1.000297
4500.0	86.7	27.0	35.8	127.6	8.7	1.000277
5000.0	85.8	25.5	40.1	137.3	7.8	1.000276
5500.0	83.0	23.9	43.6	149.5	7.1	1.000274
6000.0	82.4	22.3	46.9	144.0	7.1	1.000270
6500.0	81.1	20.7	50.2	148.9	10.3	1.000267
7000.0	79.4	19.1	53.5	140.5	14.8	1.000263
7500.0	78.1	17.5	56.8	144.7	15.9	1.000259
8000.0	76.2	16.2	60.5	148.2	17.1	1.000256
8500.0	75.4	15.0	64.2	152.5	15.1	1.000252
9000.0	74.1	13.8	68.0	160.0	11.6	1.000249
10000.0	714.9	12.5	71.7	171.1	8.5	1.000245
10500.0	702.1	14.1	74.0	189.3	6.4	1.000233
11000.0	689.5	12.8	75.7	189.1	7.5	1.000207
11500.0	677.0	11.6	76.7			1.000204
12000.0	664.8	10.4	78.7			1.000201
12500.0	652.8	9.2	79.7			1.000198
						1.000196

STATION ALTITUDE 4003.49 FEET MSI
 23 MAY 84
 ASCENSION NO. 9

MANDATORY LEVELS
 1440200009
 000

GEODETIC COORDINATES
 37.57209 LAT DEG
 106.29439 LON DEG

TABLE 22

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM.		WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	DEWPOINT PERCENT	PERCENT	DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5126.	25.1	11.0	41.	140.2	7.5	
800.0	6857.	19.4	9.4	53.	140.6	13.5	
750.0	8666.	14.6	8.2	66.	154.6	13.9	
700.0	10573.	13.8	-6.4	24.	169.0	7.6	